ART 34 NOT EXTENDED
CLAIMS ARNT IN CONSECUTIVE ORDER

English Translation of Amendments under PCT Article 34 filed on June 7, 2004

top display frame of a predetermined VU; and (iii) VU_PN for indicating relative pack numbers counted from a top of the file. The VU_PTS and the VU_PN make it possible to specify a position of a VU corresponding to a specific PTS. Namely, the VU_PTS indicates reproduction start time of the original stream (AV data).

As shown in Fig. 11(a), the VU_flags() includes first_unit_flag. The first_unit_flag is 1-bit information. As shown in Fig. 11(b), the first_unit_flag indicative of 0b means that a managed VU is not positioned in the head of the CU, whereas the first_unit_flag indicative of 1b means that a managed VU is positioned in the head of the CU.

As shown in Fig. 12(a), the continuous_area_table() is made up of (i) number_of_continuous_area for indicating the number of the CAs; and (ii) continuous_area_info() for storing information about each of the CAs.

As shown in Fig. 12(b), the continuous_area_info() is made up of (i) CA_flags for indicating various kinds of attribution information about a predetermined CA; (ii) CA_PTS for storing a PTS (Presentation Time Stamp) of a top display frame of a CU corresponding to the CA; and (iii) CA_PN for indicating relative pack numbers counted from a top of the file. The CA_PTS and the CA_PN make it possible to specify a position of a CA corresponding to a

specific PTS in the original stream. The CA_PN indicates position information of a first continuous region for recording the CA and the CU, in other words, the CA_PN indicates head position information of the CA.

As shown in Fig. 13(a), the CA_flags() includes "placement_flag". The placement_flag is 1-bit information. As shown in Fig. 13(b), the placement_flag indicative of 0b means that a managed CA is not positioned just before a corresponding CU (that is to be reproduced in synchronism with the CA), whereas the placement_flag indicative of 1b means that a managed CA is positioned just before a corresponding CU (that is to be reproduced in synchronism with the CA).

Making reference to the flag allows for realization whether or not the non-destructively edited result possibly cause the interruption during the reproduction. Specifically, seeking of the CA is carried out when the placement_flag is indicative of 0b. This notifies that the reproduction is highly likely to be interrupted.

Note that explanation of the o_attribute() and the p_attribute() is omitted.

Finally explained is the program information file. As shown in Fig. 14, the program information file is made up of (i) pg_attribute() for storing attribution information of entire program information; and (ii) scene_table() for

storing attribution information of

CLAIMS:

1. (Amended) A method for recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

the method comprising:

a first step of dividing the AV data into partial AV data based on a unit that the AV data is synchronized with the associated data, and of dividing the associated data into partial associated data based on a unit that the associated data is synchronized with the AV data;

a second step of securing, in the recording medium, a first continuous region for continuously storing the partial AV data and the partial associated data, which are to be synchronized with each other;

a third step of continuously recording the partial AV data and the partial associated data onto the first continuous region; and

a fourth step of recording, onto the recording medium, file system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as the different files.

2. The method as set forth in claim 1, further comprising:

a fifth step of recording, onto the recording medium, (i) reproduction start time of the partial AV data, and (ii) correspondence information of the partial AV data and the partial associated data, both of which are disposed in the first continuous region.

3. The method as set forth in claim 1, further comprising:

a sixth step of recording, onto the recording medium, information indicating whether or not the partial associated data is recorded adjacent to the corresponding partial AV data.

6. The method as set forth in claim 4, further comprising:

an eighth step of recording, onto the recording medium, (i) reproduction start time of the partial AV data, and (ii) correspondence information of the partial AV data and the partial associated data, both of which are disposed in the first continuous region.

7. The method as set forth in claim 4, further

comprising:

a ninth step of recording, onto the recording medium, information indicating whether or not the partial associated data is recorded adjacent to the corresponding partial AV data.

8. (Amended) An AV data recording apparatus for recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be reproduced in synchronism with the AV data,

the AV recording apparatus, comprising:

means for dividing the AV data into partial AV data based on a unit that the AV data is synchronized with the associated data, and for dividing the associated data into partial associated data based on a unit that the associated data is synchronized with the AV data;

means for securing, in the recording medium, a first continuous region for continuously storing the partial AV data and the partial associated data, which are to be synchronized with each other;

means for continuously recording the partial AV data and the partial associated data onto the first continuous region; and

means for recording, onto the recording medium, file

system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as different files.

9. An AV data recording apparatus for recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be synchronized with the AV data,

the AV data recording apparatus comprising:

means for dividing the AV data into partial AV data in accordance with a predetermined interval;

means for securing a first continuous region including a second region for securing, during recording of the associated data, a region for storing the associated data corresponding to the partial AV data; and

means for recording, onto the recording medium, file system management information for (i) managing the partial AV data and the second region as different files, and (ii) managing information for handling the partial AV data and the second region as different files.

10. The AV data recording apparatus as set forth in claim 9, further comprising:

means for dividing, during the recording of the associated data, the associated data into partial associated data in accordance with a predetermined interval;

means for recording, during the recording of the associated data, the partial associated data onto the second region that is stored in continuity with relevant partial AV data; and

means for recording, onto the recording medium during the recording of the associated data, file system management information for (i) managing the partial associated data as a file different from respective files of the partial AV data and the second region, and (ii) managing information for handling the partial associated data as a file different from respective files of the partial AV data and the second region.

11. (Amended) A data recording medium for storing (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be synchronized with the AV data,

wherein:

the data recording medium continuously stores (i) partial AV data obtained by dividing the AV data based on a unit that the AV data is synchronized with the

associated data, and (ii) partial associated data obtained by dividing the associated data based on a unit that the associated data is synchronized with the AV data; and

the data recording medium stores file system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as different files.

12. (Amended) A program for causing a computer to recording, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be synchronized with the AV data,

the program causing the computer to perform:

a first step of dividing the AV data into partial AV data based on a unit that the AV data is synchronized with the associated data, and of dividing the associated data into partial associated data based on a unit that the associated data is synchronized with the AV data;

a second step of securing, in the recording medium, a first continuous region for continuously storing the partial AV data and the partial associated data, which are to be synchronized with each other;

a third step of continuously recording the partial AV

data and the partial associated data onto the first continuous region; and

a fourth step of recording, onto the recording medium, file system management information for (i) managing the partial AV data and the partial associated data as different files, and (ii) managing information for handling the partial AV data and the partial associated data as different files.

13. (Amended) A program for causing a computer to record, onto a recording medium, (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be synchronized with the AV data,

the program causing the computer to perform:

a first step of dividing the AV data into partial AV data in accordance with a predetermined interval;

a second step of securing a first continuous region including a second region for securing, during recording of the associated data, a region for storing the associated data corresponding to the partial AV data; and

a fourth step of recording, onto the recording medium, file system management information for (i) managing the partial AV data and the second region as different files, and (ii) managing information for handling

the partial AV data and the second region as different files.

14. A recording medium for storing the program as set forth in claim 12 or 13.

15. The method as set forth in claim 4, further comprising:

a tenth step of recording, during the recording of the associated data, the associated data onto the second region that is stored in continuity with relevant partial AV data; and

an eleventh step of recording, onto the recording medium during the recording of the associated data, file system management information for (i) managing the associated data as a file different from respective files of the partial AV data and the second region, and (ii) managing information for handling the associated data as a file different from respective files of the partial AV data and the second region.

16. The method as set forth in claim 4, wherein:

upon the creation of the second region, a size of the second region is determined in consideration of occurrence of a defect.

17. The AV data recording apparatus as set forth in claim 9, comprising:

means for recording the associated data onto the second region that is stored in continuity with relevant partial AV data; and

means for recording, onto the recording medium during the recording of the associated data, file system management information for (i) managing the associated data as a file different from respective files of the partial AV data and the second region, and (ii) managing information for handling the associated data as a file different from respective files of the partial AV data and the second region.

18. A data recording medium that can store (i) AV data obtained by multiplexing a plurality of sets of stream data in accordance with a predetermined multiplexing rule, and (ii) associated data to be synchronized with the AV data,

wherein:

the AV data is divided into partial AV data in accordance with a predetermined interval;

the AV data is recorded such that a series of the partial AV data is positioned in continuity with a second

region for securing a region for storing associated data corresponding to the partial AV data;

the data recording medium stores file system management information for (i) managing the partial AV data and the second region as different files, and (ii) managing information for handling the partial AV data and the second region as different files.

19. (Added) The method as set forth in claim 1, wherein:

the partial AV data is constituted by the integral number of individually reproducible units.

20. (Added) The method as set forth in claim 19, further comprising:

a seventh step of recording information indicating whether or not each of the individually reproducible units is positioned in a head of the partial AV data.